W. EPPELSHEIMER.

Means for Turning Cars on Short Curves.

No. 166,976. Patented Aug. 24, 1875.

Fig: 1.

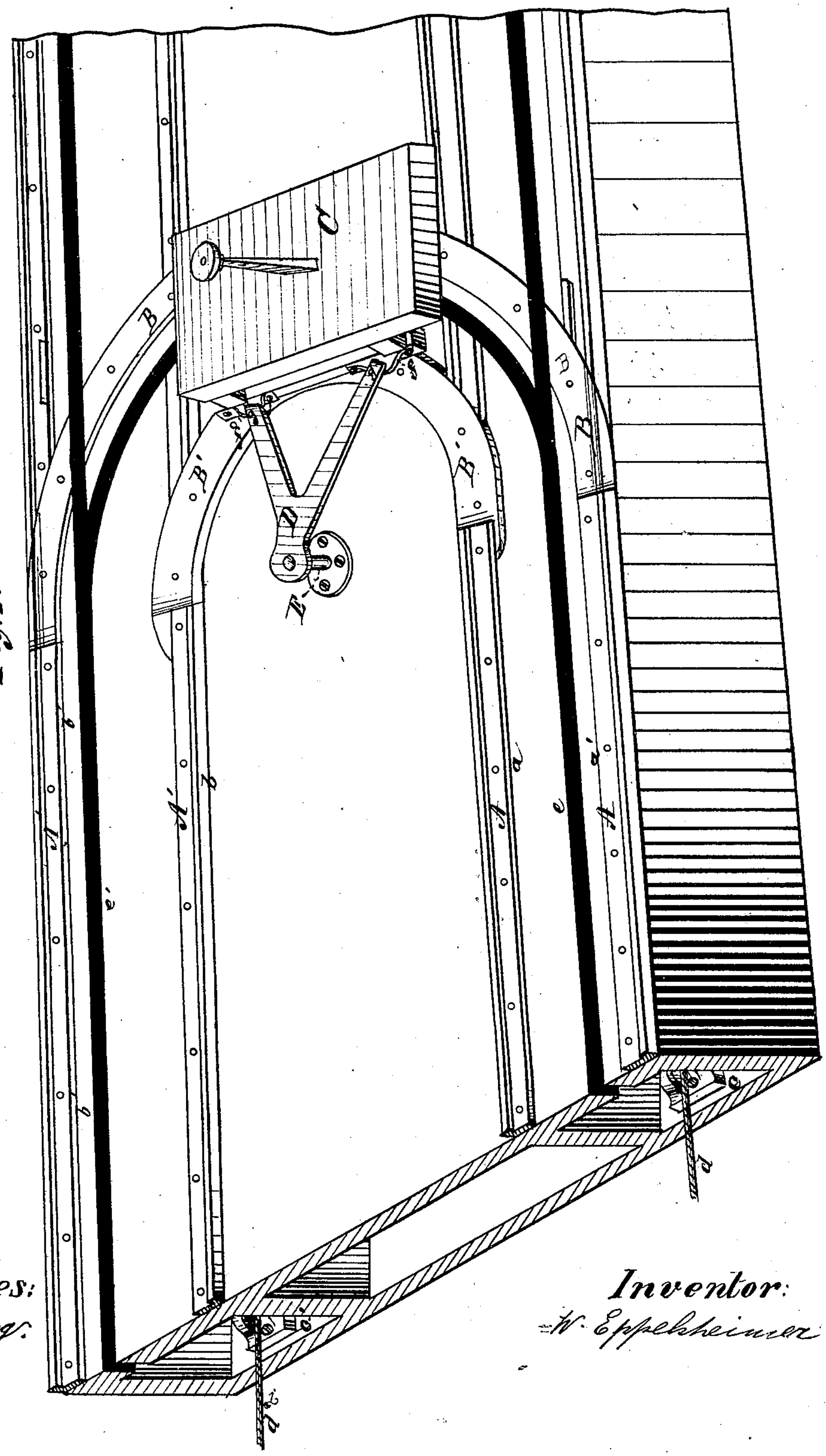
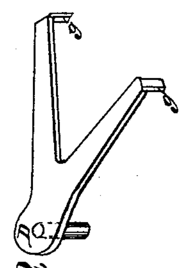


Fig: 2.



Witnesses:

Henry Eichling.

B. S. Clark

Inventor:

W. Eppelsheimer

UNITED STATES PATENT OFFICE.

WILLIAM EPPELSHEIMER, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN MEANS FOR TURNING CARS ON SHORT CURVES.

Specification forming part of Letters Patent No. **166,976**, dated August 24, 1875; application filed July 8, 1875.

To all whom it may concern:

Be it known that I, WILLIAM EPPELSHEIMER, of San Francisco, in the State of California, have invented a device to facilitate the running of railway-cars on short curves, of which the following is a specification, reference being had to the accompanying drawings, forming part of the same.

Figure 1 is a perspective view of a railway to which my invention is applied for running a car from one track to another on a short curve; and Fig. 2 is a perspective detached view of the forked lever designed to hold the car upon the track while running around the short curve from one track to another, as is fully described hereafter.

The road represented in the drawing, Fig. 1, is one upon which cars are propelled by an endless moving rope running underneath the track, the car being grappled to the rope by a suitable grappling device attached to an arm or standard depending from the car, which reaches the rope through a slit or opening in the roadway, between the rails of the track. This peculiar construction of road and method of propelling cars are designed for the streets of towns and cities, and are now in operation in San Francisco, California. It is common to lay two tracks in the same street, the cars running in one direction on one of the tracks, and in the opposite direction on the other. The construction and arrangement of the mechanism by which the car is grappled to the subterraneous traveling rope is such that it is most convenient to have the car always run with the same end foremost. In being transferred from one track to the other, therefore, the car has to be turned end for end. This may of course be done by a turn-table, which is the common method.

My invention is designed to do away with the turn-table, which is expensive and requires attendance, and to enable the car to run from one track to the other on a short curve, as only a very short curve is practicable in a street where two tracks are laid.

A and A′ are two railway-tracks, laid not many feet apart, *a a′* and *b b′* being the rails of the respective tracks. *c* and *c′* represent subterranean rope-chambers under the tracks, respectively; and *d d′*, the traveling ropes for propelling the cars. The heavy dark lines *e e′* represent continuous slits or narrow openings through the roadways, between the rails of the tracks, into the rope-chambers. These are traversed by the arm or standard depending from the car-body, to which the device for grappling to the rope is attached. B and B′ are two semicircular broad flat rails, connecting, respectively, the rails of the two tracks. These may be placed at the end of the road, or at any intermediate points, or both, whenever it is desired to transfer the cars from one track to the other. The subterranean chamber and the opening *e* are continued around this curve, and if at the end of the road, the rope may also run around the curve through the chamber, upon suitable pulleys provided for it. C is a crude representation of a car, or, rather, the platform of a car, which is sufficient for the purposes of illustration. D is a forked lever, strongly pivoted on a standard, E, fixed in the ground midway between the tracks, and equally distant from all parts of the curved rails B and B′. The car is provided at either end with a strong bracket, *f f′*, secured to the frame of the truck or body. In these brackets are holes to receive the ends of the two arms *g g′* of the forked lever D, which are turned down at right angles, as shown. Any other preferred method of connecting the car to the lever D may be employed—as, for example, a bolt or pin passing through the ends of the said arms and the brackets or hooks linked to the lever and catching into the brackets, or vice versa. In fact, it is not absolutely essential that the connection between the pivotal center E shall be rigid bars. As the tendency of the car, in turning this curve, is to run off on its outer side, or away from the center E, the arms *g g′* may be chains or ropes.

When the car reaches either end of the curved track the pivoted lever is attached, and the car, then propelled in any way, either by hand or by the rope, (if the rope runs through the curved rope-chamber,) must necessarily traverse the curved rails and pass from one straight track to the other.

The standard E may, if preferred, be fixed to the lever D, and made to revolve in a socket

set in the roadway, and thus the lever, being removed when not in use, will leave the street unobstructed.

If in running the car connected with the lever D around on the curved track it is found that the slipping of the wheels on the track upon one side of the car (which must necessarily occur) is greatly objectionable, the car may be provided with one or more independent traction-wheels, designed to be let down on the curve, so as to take the burden of one side or end of the cars upon itself.

What I claim as my invention, and desire to secure by Letters Patent, is—

In combination with two railway-tracks laid in the same street, the curved ways B and B′ and the forked pivoted lever D, as and for the purpose described.

In witness whereof I have hereunto set my hand this 7th day of July, 1875.

WILLIAM EPPELSHEIMER.

Witnesses:

B. S. CLARK,

HENRY EICHLING.